

U.S. ENVIRONMENTAL PROTECTION AGENCY

Subject to Availability of Funding

Solicitation Notice; Environmental Information Exchange Network Grant Program; Fiscal Year 2004

SUMMARY: The United States Environmental Protection Agency (EPA) announces that the Environmental Information Exchange Network Grant Program is now soliciting pre-proposals for the Program. The Exchange Network is an Internet and standards-based information systems network among EPA and its partners in States, Tribes, and Territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic storage and collection of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government and with the public; it revolutionizes the way in which information is sent to and received by EPA and its State, Tribal, and Territorial partners. For examples of projects that EPA has funded in the past, please see the State and Tribal summaries of proposals that are available on the Exchange Network Grant Program Web site at <http://www.epa.gov/Networkg>.

DATES: Pre-proposals must be received electronically at neengprg@epamail.epa.gov no later than February 3, 2004.

FOR FURTHER INFORMATION: Contact Rebecca Moser, Office of Information Collection, Office of Environmental Information, U.S. EPA, 1200 Pennsylvania Ave., NW,

Mail Code 2823-T, Washington, DC 20460; phone, (202) 566-1679; email,
neengprg@epamail.epa.gov. For additional information about the Exchange Network

Grant Program, please visit the Web site at <http://www.epa.gov/Networkg>.

An Information Session for potential applicants has been scheduled for Monday, December 15, 2003, from 2:00 to 4:00 p.m. Eastern Standard Time. If you are interested in participating in this teleconference, please contact Rebecca Moser at the number listed above.

Date

Mark A. Luttner

Director

Office of Information Collection

Office of Environmental Information

U.S. Environmental Protection Agency

**FY2004 ENVIRONMENTAL INFORMATION
EXCHANGE NETWORK GRANT PROGRAM**

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SECTION I. ELIGIBILITY INFORMATION

Eligible applicants include States, the District of Columbia, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands (subsequently referred to collectively as States) and Federally Recognized Indian Tribes (subsequently referred to as Tribes) and agencies or departments within the States or Tribes.

Applicants must indicate an intent and commitment to participate in the Exchange

Network. Exchange Network participation involves the use of Web services to move data and information, the use of eXtensible Markup Language (XML) schema to format data, and the use of data standards within these schema to improve data clarity. Applicants should use data standards that have been approved by the Environmental Data Standards Council (EDSC) and XML schema that have been approved by the Technical Resource Group (TRG, a workgroup established by the Network Steering Board (NSB)), where such standards or schema are available. If the appropriate data standards or XML schema are not available, applicants should indicate how they will use existing guidelines to establish common terms, definitions, and XML schema for exchanging their data.

For a list of EDSC-approved data standards, please refer to the EDSC Web site, <http://www.epa.gov/edsc>. Information on EPA's implementation of EDSC-approved data standards is available on the Environmental Data Registry Web site, <http://www.epa.gov/edr>. For guidance on the development of XML schema and the TRG approval process, please refer to the Network Steering Board's (NSB's) Exchange Network Web site <http://www.Exchangenetwork.net>.

Agencies or departments within a State or Tribe should coordinate submissions of pre-proposals through the appropriate State or Tribal environmental agency and indicate that this coordination has taken place in the pre-proposal submitted to EPA. No cost-sharing or matching of funds is required on the part of the applicants.

SECTION II. FUNDING OPPORTUNITY DESCRIPTION

Congressional action on the President's fiscal year (FY) 2004 budget includes \$20 million to support the Exchange Network. Subject to the availability of appropriations for

this purpose, EPA is soliciting pre-proposals that will support and accelerate the development of the Exchange Network. Ten percent of the appropriated funds will be set aside for Tribal assistance agreements. The total number and amount of the assistance agreements awarded will depend on the amount of funding for the Exchange Network in the FY 2004 EPA appropriations. The Catalog of Federal Domestic Assistance number is 66.608. Funding beyond FY 2004 will depend on continued appropriations.

Assistance agreements are used by EPA to transfer money, property, services, or anything of value to a recipient to accomplish a public purpose; they may be in the form of a grant or a cooperative agreement. These assistance agreements will be funded in three separate categories: Readiness, Implementation, and Challenge. The funding ranges for these categories will be as follows:

- 1) Readiness Category – States up to \$150,000 and Tribes up to \$75,000;
- 2) Implementation Category – States up to \$300,000 and Tribes up to \$150,000; and
- 3) Challenge Category – States up to \$750,000 and Tribes up to \$300,000.

SECTION III. AWARD INFORMATION

Subsequent to EPA's receiving FY 2004 appropriations for the Exchange Network, the EPA Administrator may delegate authority to approve pre-proposals for funding to the Assistant Administrator of the Office of Environmental Information (OEI) and delegate authority to award the assistance agreements to the EPA Regional Administrators. Thus, OEI anticipates that the selection of pre-proposals for funding will be made by the OEI Assistant Administrator, as in previous years, and that the processing, awarding, and management of assistance agreements may be handled by the appropriate EPA Regional

Offices.

It is EPA's policy to promote competition in the award of assistance agreements. EPA will strive to ensure that the competitive process is fair and open and that no applicant receives an unfair competitive advantage. Only those eligible applicants whose pre-proposals are selected for funding will need to proceed with developing and submitting the formal assistance agreement application package.

After EPA notifies the applicants whose pre-proposals have been selected for funding, those applicants will have 45 days to complete and submit the formal assistance agreement application package to the appropriate Network Regional Coordinator.

The duration of each project and the final scope of activities to be completed will be determined in pre-award discussions between the applicant and the appropriate EPA Network Regional Coordinator. In anticipation of this process, all applicants should refer to the Web site <http://www.epa.gov/ogd/AppKit> and review the forms and documentation required for submitting final applications.

Applicants whose pre-proposals are selected for funding may request that assistance be provided in the form of a grant or cooperative agreement. Such a request should be based on the desired level of EPA involvement in the project and *must* be made in writing prior to the award of the assistance agreement.

A **grant** may be the most appropriate legal instrument if the proposed activities are not principally for the direct benefit or use of the Federal Government and *no substantial involvement is anticipated between EPA and the recipient* during the program period. A **cooperative agreement** may be more appropriate if the proposed activities are not

principally for the direct benefit or use of the Federal Government and *substantial involvement is anticipated between EPA and the recipient* during the program period.

All or part of a grant or cooperative agreement may be provided in the form of *in-kind assistance* (in lieu of funding) if it would be more efficient in terms of cost or time for EPA to purchase services or equipment on a recipient's behalf (e.g., through an EPA-approved contractor). (Policy for Distinguishing between Assistance and Acquisition, EPA Order 5700.1, March 22, 1994).

A recipient may also choose to receive an Exchange Network assistance agreement as part of a ***Performance Partnership Grant (PPG)***. PPGs can provide States with greater flexibility during the work plan negotiation process and allow them to organize their work plan components in ways that best suit their specific needs. Where appropriate, the assistance agreement work plan will reflect both EPA and State roles and responsibilities, and a joint performance evaluation process will be negotiated.

For additional information on assistance agreements or for guidance in preparing pre-proposals or final applications, please contact the appropriate Exchange Network Regional Coordinator or Rebecca Moser in EPA's Office of Information Collection (see Section IX).

SECTION IV. APPLICATION AND SUBMISSION INFORMATION

Based on an evaluation of pre-proposals, EPA expects to make funding decisions in the Spring of 2004. EPA may ask applicants whose pre-proposals have been selected for funding to modify objectives, work plans, or budgets prior to giving final approval of the award.

Pre-proposals must be submitted electronically in either WordPerfect or Microsoft Word by February 3, 2004, to neengprg@epa.gov with an electronic copy to the appropriate Exchange Network Regional Coordinator (see Section IX). Each pre-proposal should not exceed 10 single-spaced pages (12 point font).

Pre-proposals should follow the following format:

I. Project Information

State/Tribe/Territory Agency or Department:

Title of Project:

Focus Area (i.e., Readiness, Implementation, or Challenge):

Total Funds Requested from EPA:

Total Project Cost (including State/Tribal cash contributions, if applicable):

Contact Person (name, title, address, phone, fax, & email):

II. Overview

Provide an overview of the project that explains the purpose, goals, and objectives.

This section should give reviewers an understanding of the nature and expected outcomes of the

project. If applicable, explain how the project will build on previous work supported by the Exchange Network Grant Program.

III. Summary Work Plan

Describe what the project will achieve and who will benefit from the project. Explain each aspect of the project in enough detail to allow reviewers to understand and

evaluate it. No specific format is required for this section, but pre-proposals should address the following:

- **Proposed Activities:** List and describe the activities and how they relate to the evaluation criteria described in Section VI of this guidance.
- **Project Milestones:** List the key project milestones, with estimated dates for completion.
- **Performance Measures:** Describe how the success of the project will be measured.
- **Sharing Results:** Indicate a commitment to share results with other Exchange Network partners by working with the NSB to post those results at <http://www.exchangenetwork.net>.

Applicants should be aware that pre-proposals and applications submitted under this or any other EPA assistance agreement program are subject to potential public release under the Freedom of Information Act (FOIA). If an applicant considers any of the information submitted in the pre-proposal or application to be Confidential Business Information (CBI), the applicant must claim that information as CBI when the pre-proposal or application is submitted to EPA [40 CFR 2.203(a)].

SECTION V. APPLICATION REVIEW INFORMATION

Pre-proposals will be evaluated separately for each assistance agreement category: Readiness, Implementation, or Challenge. The criteria and scoring system outlined in Section VI will be used to guide the evaluation of each pre-proposal. The scoring system allows each pre-proposal to be given a numeric value based on the criteria. A value of one

to a maximum of 90 will be assigned for one or more of the activities listed in the criteria. A value of one to 10 will be assigned for describing the benefits of the project being proposed. The maximum score for any pre-proposal submitted would be 100. Pre-proposals will be initially screened based on this criteria and scoring system.

After the pre-proposals have been initially scored, EPA will form a review panel composed of representatives from EPA Headquarters and Regional Offices. This panel will consider not only the initial scoring, but also the basic substance and quality of each pre-proposal and the overall mix of projects. The panel may also consider other factors on a case-by-case basis when deciding whether to recommend funding for a specific proposal. The panel will review each pre-proposal and provide its funding recommendations to the OEI Assistant Administrator for a final decision.

Any mandatory requirements set forth in this document may be waived at the discretion of the OEI Assistant Administrator.

SECTION VI. ASSISTANCE AGREEMENT CATEGORIES AND EVALUATION CRITERIA

OEI will consider funding pre-proposals for the three categories of assistance agreements described below: Readiness, Implementation, and Challenge. The categories have different, but complementary, objectives and evaluation criteria. One cross-cutting criterion for all categories is the description of benefits and advantages of using the Exchange Network to improve existing data exchange practices. This section should not exceed one-half page of the pre-proposal. Each pre-proposal must clearly indicate that the project can be completed in two years or less. The following points are provided to assist,

but not limit, applicants in describing the expected benefits of their proposed projects:

- more frequent and/or efficient exchanges;
- better data quality through the use of data standards and validation and error-detection mechanisms;
- greater ability to share and integrate data through the use of data standards, XML schema, and Exchange Network Web services;
- the ability to exchange a variety of data with a number of partners;
- the ability to provide access to new kinds of data using the Exchange Network; and/or
- the ability to use common Exchange Network infrastructure capabilities (e.g. XML schema, common security controls, etc.).

SECTION VI(A). EVALUATION CRITERIA FOR TRIBES

Readiness Category for Tribes

Amount: up to \$75,000.

Eligibility: Applicants who have received no more than one Readiness Grant. This category is intended to assist Tribes in building upon their priority information technology investments while constructing initial links to the Exchange Network.

Criteria

1) *Maximum of 90 points for one or more of the following activities:*

- a) Develop the technical infrastructure needed to participate in the Exchange Network (e.g., servers, processors, storage devices/media, telecommunications products/services, computer peripherals). Tribes may wish to use the node client tool that is being available on the Network Web Site.

- b) Develop Web-based services, security enhancements, data quality improvements, locational data improvements [e.g., through global positioning system (GPS) units], or other capabilities that will enhance the Tribe's participation in the Exchange Network.

Make a commitment to share this information with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If a recipient of a previous Exchange Network assistance agreement, outline activities that build on and do not duplicate previously funded activities.

2) *10 points*

Identify the benefits of the project (see Section VI introduction).

Implementation Category for Tribes

Amount: up to \$150,000.

Eligibility: This category is designed to assist Tribes in sharing data and building on their information technology investments, while constructing links to the Exchange Network.

Criteria:

- 1) *Maximum of 90 points for one or more of the following activities.*

All activities listed in the Readiness Category may be considered for funding under this category with the addition of at least one of the following activities:

- a) Share environmental data with other Tribes, States, and/or EPA.
- b) Work with EPA, other Tribes, or States to use Web services they have or plan to provide. Tribes can satisfy the Exchange Network data exchange objectives by using

Web service applications, such as those found on the Exchange Network Web site, <http://www.exchangenetwork.net>, under “Tool Box.”

- c) Implement a project to link and exchange tribal data assets using standards.

Projects could include things such as implementing the EDSC-approved Facility Identification data standard (refer to <http://www.epa.gov/edsc>), referencing water monitoring stations to the National Hydrography Dataset (NHD) (e.g., using the Geospatial One-Stop hydrography data standard, which is currently under review), or other data exchange activities involving the use of data standards.

- d) Enhance public access to data about pollution sources, the environmental performance of regulated facilities, or environmental status and trends.

In addition to pursuing one or more of the activities listed above, applicants must make a commitment to share information about their projects with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If an applicant has received funding through a previous Exchange Network assistance agreement, the applicant must identify activities that build on, but do not duplicate, previously funded activities.

2) *10 points*

Identify the benefits of the project (see Section VI introduction).

Supplementary Information:

Projects funded under the Implementation Category may be collaborative efforts among multiple parties (intertribal, intratribal), but collaboration is not required. If a collaborative project is proposed, the pre-proposal must identify a single lead agency or

department that would be responsible for administering the assistance agreement.

Challenge Category for Tribes

Amount: up to \$300,000

Eligibility: Applicants must propose activities that involve collaboration (e.g., intra tribal, intertribal, or State/Tribal) to develop the Exchange Network and demonstrate its value in sharing environmental, natural resources, or human health data and/or related administrative data.

Criteria:

1) *Maximum of 90 points for one or more of the following activities:*

- a) Implement any type of data flow using the Exchange Network.
- b) Conduct multi-party planning activities to develop new data flows, explaining how the new data would be used and shared via the Exchange Network. This activity could include developing a collaborative project plan for possible submission to EPA if future funding becomes available.
- c) Use the Exchange Network to integrate and use information for environmental decision-making and public access, including Geospatial data. Projects could include, but are not limited to, activities that would improve the locational data for facilities in EPA's Facility Registry System.
- d) Use the Exchange Network to share data that have not previously been available for environmental and human health protection purposes (e.g., environmentally related

health data, regional environmental data, data needed to fill current data gaps, etc.).

EPA has recently entered into a Memorandum of Understanding (MOU) with the Centers for Disease Control and Prevention to collaboratively collect data for the Environmental Public Health Tracking System; applicants may be interested in proposing activities that complement this effort using the Exchange Network.

- e) Enhance the Exchange Network by developing tools/applications that use data made available through Web services.

In addition to pursuing one or more of the activities listed above, applicants must make a commitment to share information about their projects with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If an applicant has received funding through a previous Exchange Network assistance agreement, the applicant must identify activities that build on, but do not duplicate, previously funded activities.

2) *10 points*

Identify the benefits of the project (see Section VI introduction).

Supplementary Information:

Projects funded under the Challenge Category *must be collaborative efforts*. The pre-proposal must identify a single lead agency or department that will be responsible for administering the assistance agreement, if awarded.

In addition to the criteria outlined above, EPA may elect to fund complementary pre-proposals from different partners that address related work areas (e.g., XML schema development) and it will seek to leverage and coordinate all of the complementary pre-

proposals before reaching final funding decisions.

In making award decisions, EPA will examine the past performance of those who have received previous Exchange Network assistance agreements (e.g., timely and complete semi-annual reports, achievement of performance goals/milestones, etc.). If two proposals have been scored equally, the one with the best previous track record may be ranked higher. If an applicant has not received a prior Exchange Network assistance agreement, that applicant will not be penalized.

SECTION VI(B). EVALUATION CRITERIA FOR STATES

Readiness Category for States

Amount: up to \$150,000.

Eligibility: Applicants who have received no more than one Readiness Grant.

Criteria:

1) Maximum of 90 points:

Develop an operational Exchange Network node in a reasonable period of time (e.g., one to two years) depending on the applicant's current capabilities and previously funded work. In addition to developing an Exchange Network node, applicants must make a commitment to share information about their projects with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If an applicant has received funding through a previous Exchange Network assistance agreement, the applicant must identify activities that build on, but do not duplicate, previously funded activities.

2) 10 points

Identify the benefits of the project (see Section VI introduction).

Supplementary Information:

An Exchange Network node is considered to be operational if it performs the following: (1) executes all Exchange Network Web service functions (i.e., Authenticate, Submit, Get Status, Query, Notify, Solicit, Download, Node Ping, and Get Services), (2) implements the minimum Exchange Network security practices (including the use of the Network Authorization and Authentication Service), and (3) routinely exchanges one or more data flows. When developing Exchange Network nodes, applicants should refer to the Node Test Suite on the Exchange Network Website. All Network Nodes should pass the interoperability tests on this site. This site also contains technical specifications and protocols, as well as the implementation guidance developed by the NSB's Node 1.0 Workgroup. Please refer to <http://www.exchangenetwork.net> and click on "Tool Box."

Implementation Category for States

Amount: up to \$300,000.

Eligibility for States: Applicants, or groups of applicants, that (1) have produced a detailed technical plan to develop an operational node by the end of calendar year 2004, (2) have developed an Exchange Network node and are in the final stages of testing that node, (3) are ready to flow data, *or* (4) are already flowing data.

Criteria

- 1) *Maximum of 90 points.* If States believe that they can implement more than two or three data flows during the two-year program period, they should identify those data flows in their pre-proposals.

a) Implement one or more of the following data flows using the Exchange Network
(see Section VIII for details)

- Air Quality System (AQS)
- Facility Registry System (FRS)
- National Emissions Inventory (NEI)
- Resource Conservation and Recovery Act Information System (RCRAInfo)
- Safe Drinking Water Information System (SDWIS)
- Toxics Release Inventory System (TRIS)

b) Implement any other type of data flow (regulatory or voluntary, State-to-EPA, facility-to-State, State-to-State, etc.) using the Exchange Network.

In addition to implementing one or more data flows, applicants must make a commitment to share information about their projects with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If an applicant has received funding through a previous Exchange Network assistance agreement, the applicant must identify activities that build on, but do not duplicate, previously funded activities.

2) *10 points*

Identify the benefits of the project (see Section VI introduction).

Supplementary Information:

Projects funded under the Implementation Category may be collaborative efforts among multiple parties (interstate or intrastate), but collaboration is not required. If a collaborative project is proposed, the pre-proposal must identify a single lead agency or

department that would be responsible for administering the assistance agreement.

Challenge Category for States

Amount: up to \$750,000 each.

Eligibility: Applicants must propose innovative projects that involve collaboration (e.g., State-EPA, intrastate, or interstate) to develop the Exchange Network and demonstrate its value in sharing environmental, natural resources, or human health data and/or related administrative data.

Criteria:

1) *Maximum of 90 points for one or more of the following activities.* If desired, applicants may propose activities from several different categories [(a) - (f) below] and receive partial credit from multiple categories; but they are not required to do so to receive the full 90 points. Applicants who submit well thought-out, innovative, collaborative proposals for multiple data flows [i.e., as in (a) and/or (b) below] or for just one of the other activities listed [i.e., in (c) through (f) below] will receive the same consideration as those who suggest activities from multiple categories.

a) Implement one or more of the following data flows using the Exchange Network (see Section VIII for details) *(45 points each)*:

- Air Quality System (AQS)
- Facility Registry System (FRS)
- National Emissions Inventory (NEI)
- Resource Conservation and Recovery Act Information System (RCRAInfo)
- Safe Drinking Water Information System (SDWIS)

- Toxics Release Inventory System (TRIS)
- b) Implement any other type of data flow (regulatory or voluntary, State-to-EPA, facility-to-State, State-to-State, etc.) using the Exchange Network. *(30 points each)*
 - c) Conduct multi-party planning activities to develop new data flows, explaining how the new data would be used and shared via the Exchange Network. This activity could include developing a collaborative project plan for possible submission to EPA if future funding becomes available. *(up to 90 points)*
 - d) Use the Exchange Network to integrate and use information for environmental decision-making and public access, including geospatial data. Projects could include, but are not limited to, activities that would improve the locational data for facilities in EPA's Facility Registry System. *(up to 90 points)*
 - e) Use the Exchange Network to share data that have not previously been available for environmental and human health protection purposes (e.g., environmentally related health data, regional environmental data, data needed to fill current data gaps, etc.). EPA has recently entered into a Memorandum of Understanding (MOU) with the Centers for Disease Control and Prevention to collaboratively collect data for the Environmental Public Health Tracking System; applicants may be interested in proposing activities that complement this effort using the Exchange Network. *(up to 90 points)*
 - f) Enhance the utilization of the Exchange Network by developing tools/applications that use data made available through Web services (e.g., watershed analysis tools using EPA and other partner/stakeholder data published through Web services). *(up to 90 points)*

to 90 points)

In addition to implementing one or more data flows, applicants must make a commitment to share information about their projects with other partners via the Exchange Network Web site at <http://www.exchangenetwork.net>. If an applicant has received funding through a previous Exchange Network assistance agreement, the applicant must identify activities that build on, but do not duplicate, previously funded activities.

2) *10 points*

Identify the benefits of the project (see Section VI introduction).

Supplementary Information:

Projects funded under the Challenge Category *must be collaborative efforts*. The pre-proposal must identify a single lead agency or department that will be responsible for administering the assistance agreement, if awarded.

In addition to the criteria outlined above, EPA may elect to fund complementary pre-proposals from different partners that address related work areas (e.g., XML schema development), and it will seek to leverage and coordinate all of the complementary pre-proposals before reaching final funding decisions.

In making award decisions, EPA will examine the past performance of those who have received previous Exchange Network assistance agreements (e.g., timely and complete semi-annual reports, achievement of performance goals/milestones, etc.). If two proposals have been scored equally, the one with the best previous track record may be ranked higher. If an applicant

has not received a prior Exchange Network assistance agreement, that applicant will not be penalized.

SECTION VII. AWARD ADMINISTRATION INFORMATION

The selection of pre-proposals for funding and the awarding of assistance agreements will be posted on the Exchange Network Grant Program Web site (www.epa.gov/Networkg). Recipients of assistance agreement awards will be required to submit semi-annual and final progress reports. A reporting form template will be provided to all funded grantees by the appropriate Exchange Network Regional Coordinator. Recipients will also be required to complete annual Financial Status Reports. All reports must be prepared in either Microsoft Word or WordPerfect and submitted electronically to the appropriate Exchange Network Regional Coordinator. If a disagreement arises between an eligible applicant and EPA, EPA will follow dispute resolution procedures, as outlined in 40 CFR, Part 31, Subpart F.

SECTION VIII. EPA SYSTEMS INFORMATION

Applicants are urged to consider developing FY 2004 proposals that relate to the following EPA national environmental information systems, particularly if submitting proposals for Implementation or Challenge assistance agreements:

- Air Quality System (AQS)
- Facility Registry System (FRS)
- National Emissions Inventory (NEI)
- Resource Conservation and Recovery Act Information System (RCRAInfo)
- Safe Drinking Water Information System (SDWIS)

- Toxics Release Inventory System (TRIS)

By focusing on this limited number of data flows, EPA and its partners should be able to deliver tangible results by the end of the two-year program period.

EPA urges applicants to consider the data flows listed above, but the Agency will also consider other data flow activities, particularly if such activities can demonstrate the value of the Exchange Network. Provided appropriations for the Exchange Network Grant Program become available in FY 2005, EPA plans to highlight two additional data flows in *next year's guidance*:

- Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES)
- Storage and Retrieval for Water Quality Data (STORET)

While ICIS-NPDES and STORET data flow activities may be proposed for the FY 2004 Exchange Network Grant Program, they will receive greater attention in FY 2005.

Each of the national environmental information systems identified above is described briefly below, along with current plans for the data flows and suggested activities for consideration by applicants. The implementation schedules for specific data flows differ, but the activities that EPA offices have suggested generally relate to one or more of the following:

- Improve data collection processes, the quality of data in EPA information systems, and the utility of and access to environmental data by all Exchange Network partners;
- Work with EPA to develop XML schema for particular data flows and conduct related data mapping and documentation activities;

- Develop or adapt Exchange Network nodes or node clients as required to implement particular data flows;
- Submit data through the Exchange Network and EPA's Central Data Exchange (CDX) to EPA's national environmental information systems;
- Enhance data validation mechanisms, increase the frequency of data submissions, or enhance error detection/feedback mechanisms using the Exchange Network;
- Work with EPA to develop and implement Web services to obtain, use, and integrate data from EPA and partner information systems for multiple purposes;
- Use the Exchange Network to provide access to data that are not currently available for environmental and human health protection purposes; and/or
- Enhance the value of the Exchange Network by developing tools/applications that use data that are made available through Web services.

Please note that not all of the activities listed above may be appropriate for particular data flows at this time. In addition, applicants may propose other types of data flow activities that have not been mentioned here. All proposals – whether they relate to these specific data flows or the suggested activities – will receive careful consideration by EPA.

Air Quality System (AQS)

System Description

AQS is a national database that contains ambient air quality monitoring data collected by State, Tribal, and local governments. This information is used to determine compliance with

clean air standards, assess the nature of air pollution problems in North America, and assess the exposure of humans to toxic and other airborne pollutants.

Status & Plans

- *Flat File:* The transfer of AQS flat files via CDX began in July 2003.
- *XML Schema:* The XML schema for AQS will be available by mid-2004 for voluntary use by agencies. Subsequent to schema development, EPA will develop the capability to receive and process AQS XML data.
- *Other Activities:* In late 2004, EPA expects to deploy Web services that support limited real-time stakeholder queries of selected AQS data.

Suggested Activities for Exchange Network Partners

- Conduct pilot projects to test/use the AQS XML input schema, particularly for submitting data to AQS through CDX and for performing local quality assurance checks (e.g., for format, range, and file structure). EPA is particularly interested in the development of XML error/diagnostic message schema that could accompany the XML input transaction schema. EPA is also interested in the development of XML output schema that describe standard reports and workfiles, based on the final AQS XML input schema.
- Work with EPA to develop Web services and applications that use AQS XML schema to enhance the timeliness, frequency, and/or efficiency of air quality data transmissions to EPA (e.g., possibly including real-time data transmissions).
- Develop/test approaches to implement machine-to-machine transfers of queried data using Web services and CDX.

- If maintaining significant air quality data assets that are not currently in AQS, develop approaches for using the Exchange Network to provide partners with secure access to the data.

Facility Registry System (FRS)

System Description

FRS is a national database of facility identification information. It covers all facilities (places, stations, and sites) that are subject to environmental regulations or are of environmental interest, such as Federal facilities, industrial facilities, and facilities on tribal reservations. Key identifying information stored in FRS includes facility names, alternate facility names, geographic locations (i.e., latitude/longitude), mailing addresses, points of contact, permit and system identification numbers, industrial codes, and parent organizational structures. FRS receives data from EPA's national environmental information systems and from the States, and it can receive user input from an Error Correction Web service application found in Envirofacts and the Enforcement and Compliance History Online (ECHO). The FRS database directly supports EPA's Envirofacts Data Warehouse Web site, the ECHO Web site, and the Integrated Compliance Information System (ICIS). It is also used by many EPA applications, such as Window to My Environment and EnviroMapper.

Status and Plans

- FRS data exchanges using the Exchange Network have been in production since October 2003.
- The Facility Identification schema is available on the Exchange Network Registry

(<http://www.exchangenetwork.net>), and it conforms with the XML Design Rules and Conventions Version 1.0.

- EPA currently plans to release Web services to publish FRS facility data through CDX in late 2003.

Suggested Activities for Exchange Network Partners

- Begin exchanging State and Tribal facility identification records with FRS via CDX.
- Develop the capability to use the Exchange Network to obtain, use, and integrate facility data from FRS with other State/Tribal/local data.

National Emission Inventory (NEI)

System Description

NEI is a national database of air emissions information which includes input from numerous State and local air agencies, Tribes, industry, and other Federal databases [e.g., EPA's Clean Air Markets Division (CAMD) Emission Tracking System, Maximum Achievable Control Technology (MACT) Program, and the Toxic Release Inventory (TRI)]. The database contains information on stationary and mobile sources that emit criteria air pollutants and precursors, as well as hazardous air pollutants (HAPs). NEI data are used for air dispersion modeling, tracking emission trends, and developing risk assessments, regulations, and regional pollution control strategies.

Status and Plans

- *XML Schema:* In 2004, upgraded schema will be developed for NEI Point Source, Area Non-Road, and On-Road Mobile data.

- *Pilot Data Exchanges:* EPA will conduct pilot NEI data exchanges with States in 2004.

Suggested Activities for Exchange Network Partners

- Develop approaches/processes to improve the quality of the data in State emissions inventory systems.
- Develop and participate in technical approaches to check the quality of data in State emissions inventory systems and transfer files to ensure that the data are compatible with NEI data content requirements, *before* the States submit their emissions inventory data to EPA and *after* the data are submitted to EPA through CDX.
- If maintaining significant emissions data assets that are not currently in NEI, describe the business case(s) and develop approaches for using the Exchange Network to provide partners with secure access to the data, including the documentation of data quality checks that have been performed on the data files that are made available.

Resource Conservation and Recovery Act Information System (RCRAInfo)

System Description

RCRAInfo is a national database that contains data reported by States and Regions on facilities that handle hazardous wastes and are regulated under the Resource Conservation and Recovery Act (RCRA) and equivalent State statutes. RCRAInfo includes five major modules:

Handler, Permitting, Corrective Action, Compliance Monitoring and Enforcement, and Waste Activity Report.

Status and Plans

- *Flat File:* In 2004, EPA's CDX will support Web-based flat file transfers for the

RCRAInfo Handler, Permitting, Corrective Action, Compliance Monitoring and Enforcement, and Waste Activity Report modules.

- *XML Schemas:* EPA is currently developing the XML schemas for the Handler, Permitting, and Corrective Action modules and expects these schemas to be available in September 2004. The focus of Exchange Network RCRAInfo data flows in 2004 will be on submitting data to EPA.
- *Other Activities:* In 2005, EPA will enhance RCRAInfo to automate out-bound transactions using Web services and allow States to query/retrieve data from RCRAInfo and other State nodes.

Suggested Activities for Exchange Network Partners

- Work with EPA to build Exchange Network nodes to test and implement RCRAInfo data exchanges using XML schemas.
- Work with EPA to refine and test outbound RCRAInfo Web services and build applications to use them. Proposals should identify the target user communities and describe how the development of such Web service applications would provide functionality beyond that provided by RCRAInfo. [RCRAInfo currently provides data entry tools, Headquarters/State/Regional reports, automated copies of RCRAInfo data for EnviroFacts or the Office of Enforcement and Compliance Assurance (OECA), etc.]
- Establish compatible Web services for hazardous waste information that could be used by authorized EPA/State/Tribal partners. For example, States with significant transfers of wastes to or from other States may wish to establish agreements to gain access to

data from other Exchange Network partners.

- Develop automatic periodic updates of State databases from RCRAInfo, utilizing the Exchange Network, CDX scheduling services, and XML schema.

RCRAInfo technical guidance and schedules can be found at

<http://cdx.epa.gov/RCRAFT/UserGuide>.

Safe Drinking Water Information System/Federal Version (SDWIS/FED)

System Description

SDWIS/FED is an EPA national database that stores routine information about the Nation's drinking water. SDWIS/FED is designed to replace the Federal Reporting Data System (FRDS), and it stores the information EPA needs to monitor approximately 170,000 public water systems. As required by the Safe Drinking Water Act (SDWA), States oversee public water systems within their jurisdictions to ensure compliance with EPA and State drinking water standards. States periodically report drinking water information to EPA, and this information is stored in SDWIS/FED.

Status and Plans

- *XML Schema:* OW has proposed to develop an XML schema for SDWIS as part of its modernization effort. It plans to conduct a pilot project with States in FY 2004.
- *Modernization Efforts:* OW's Office of Ground Water and Drinking Water (OGWDW) has identified the following milestones for modernizing SDWIS (the milestone numbers correspond to the numbers of suggested State activities outlined below).
 1. Maintain most or all historical support functions for both the SDWIS/FED database and SDWIS/STATE software (26 States are currently using SDWIS/STATE and

nine additional States are committed and scheduled to use it).

2. Provide drinking water data providers (States and Regions) with access to CDX through a registration process.
3. Conduct a pilot project using XML schema for a State-to-EPA data flow.
4. Conduct a pilot project using FedRep validation software (desktop application).

The software incorporates the State-to-Fed XML schema and is intended to move the validation of State data submissions closer to the data providers, thus minimizing reporting delays and errors.

5. Launch the production of the ORACLE replacement database that will allow EPA to receive XML files of drinking water data from States through CDX.
6. Enhance and expand the Drinking Water Data Warehouse. The Drinking Water Data Warehouse extracts data from SDWIS and organizes it into topic-specific Pivot Tables that are available over the Internet for on-line querying by the public. OGWDW is discussing the potential development of new formats for presenting the data.
7. Develop Web-enabled SDWIS/STATE software – the primary State implementation assistance tool.

Suggested Activities for Exchange Network Partners

EPA is interested in enhancing the exchange of drinking water data using the Exchange Network, particularly through node-to-node data exchanges and activities that improve the timeliness and completeness of the data. Suggested State activities include the following (numbers correspond to the modernization milestones outlined above):

1. Help test changes in the SDWIS software that would allow the system to accept XML-formatted data submitted by labs and public water systems.
2. Document efforts to develop/expand State nodes to allow the node-to-node exchange of drinking water data with EPA.
3.
 - a. Document how States are incorporating XML into their local data flows and how these efforts are linked to EPA's development of XML schema for State-to-EPA data flows.
 - b. Analyze the costs associated with the one-time migration of State drinking water data (for which quarterly reporting is required) from the current DTF format to the new XML format, including the costs associated with data mapping and translator tools.
4. Participate in OW's pilot project to test the FedRep software.
5.
 - a. Use XML to receive drinking water data from labs or public water systems.
 - b. Use the FedRep validation software (with built-in XML schema) to load the reporting data to State nodes.
 - c. Exchange data from State nodes with EPA's CDX.
6. There are no specific State activities suggested in relation to EPA's Drinking Water Data Warehouse.
7.
 - a. Develop a Web-enabled version of State drinking water databases (SDWIS/STATE or other)
 - b. Participate in a pilot project with EPA as OGWDW considers Web-enabling the SDWIS/STATE software.

In addition to the activities suggested above, OGWDW is interested the following potential State activities:

- Develop XML schema for drinking water occurrence data to support the six-year review process.
- Develop XML schema for occurrence data that would tie into the FedRep XML schema for drinking water violation data (currently being piloted by EPA).

Toxic Release Inventory System (TRIS)

System Description

TRIS is populated by TRI-Made Easy (TRI-ME) via CDX. TRI was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. The Toxics Release Inventory (TRI) is a publicly available database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups, as well as Federal facilities. States collect the same information from the same reporting population for their own records.

Status and Plans

- *TRI-ME*: EPA finalized the TRI-ME software for Reporting Year (RY) 2002 in March 2003, making the TRI-ME/CDX process completely paperless. Planning for RY 2003 software will begin in the Fall of 2003.

Suggested Activities for Exchange Network Partners

- Work with EPA to develop common reporting formats that would make it easier for regulated facilities to submit TRI data to States and EPA simultaneously.

- Work with EPA to develop tools/applications that use TRI data that will be made available through Web services using the Exchange Network.
- Develop processes that reduce the amount of time EPA and States must spend on reconciling TRI data received from regulated facilities.

Future Data Flow Activities

As indicated in the introduction to this section, ICIS-NPDES and STORET will receive less emphasis under the FY 2004 Exchange Network Grants Program than the information systems listed above (i.e., AQS, FRS, NEI, RCRAInfo, SDWIS, or TRIS). The following information on ICIS-NDES and STORET is provided primarily to assist Exchange Network partners in planning activities in *FY 2005 and beyond*.

Integrated Compliance Information System – National Pollutant Discharge

Elimination System (ICIS-NPDES) System

System Description

ICIS-NPDES is a modernized version of the Permit Compliance System (PCS). It supports traditional wastewater discharge program functions (e.g., permitting, compliance monitoring, and enforcement), as well as new functions for special regulatory programs [e.g., concentrated animal feeding operations (CAFO)]. ICIS-NPDES allows data exchanges using XML, Web services, and Web forms and provides links to other databases (i.e., FRS, TMDL, RAD, SRS).

Status and Plans

- *XML Schema:* The draft ICIS-NPDES schema is available for States to begin initial data mapping of State system data to ICIS-NPDES. The final ICIS-NPDES schema

will be available by June 2004, at which time States can begin finalizing their ICIS-NPDES schema mapping. Testing of the submission/acceptance of XML schema by the ICIS-NPDES system can begin in March 2006. By September 2006, OECA expects to complete the implementation of State NPDES XML data flows into ICIS-NPDES and will no longer accept flat file transfers from States into legacy PCS.

Suggested Activities for Exchange Network Partners in FY 2005 and Beyond

The modernization of legacy PCS into ICIS-NPDES will affect three groups of States:

- (1) States that currently submit flat files to legacy PCS,
- (2) States that are currently using the CDX-PCS Interim Data Exchange Format (IDEF) or have already been in discussions with EPA about doing so, and
- (3) States that are currently indirect users of legacy PCS and/or wish to become direct users of ICIS-NPDES.

States that currently submit flat files to legacy PCS and those that are current/scheduled users of CDX-PCS IDEF may wish to consider some of the following activities, which will support the exchange of NPDES XML data with ICIS-NPDES using the Exchange Network:

- Obtain technical training and support for using XML.
- Extract and convert the data from State NPDES systems into the XML format needed to submit data to ICIS-NPDES.
- Modify State systems to accommodate the new/revised data requirements of ICIS-NPDES.

- Modify State data extraction/conversion software to accommodate new/revised ICIS-NPDES submission and transaction types (e.g., for special regulatory programs).
- In coordination with EPA, clean up the State data in legacy PCS as needed to move the data into ICIS-NPDES.
- In coordination with EPA, synchronize and then migrate the data in legacy PCS to ICIS-NPDES.
- Develop XML export capabilities to generate XML data documents using the ICIS-NPDES schema.
- Implement node-to-node communications with CDX.

States that wish to become direct, on-line, users of ICIS-NPDES – rather than submitting data in the XML format through the Exchange Network – may be eligible for funding under a separate grant which OECA plans to offer in FY 2004. Please contact David Piantanida at (202) 564-8318 for further information and assistance about relevant OECA grants.

Storage and Retrieval System (STORET)

System Description

STORET is EPA's main repository of water quality and biological monitoring data. It contains data obtained from a variety of organizations across the United States ranging from small volunteer watershed groups to State and Federal environmental agencies. Currently, data are entered into a locally operated copy of STORET through the use of a series of desktop validation software applications provided by EPA. These data are centralized at EPA and made available to the public through an Internet accessible data

warehouse. This architecture ensures that data owners maintain complete control over data content, while at the same time, promoting shared access to these data through the EPA data warehouse.

Status and Plans

- 1) *XML Schema:* XML tags which support the Office of Water's Water Quality Data Elements (WQDE) have been published for review. A joint project with the EPA Beaches Program has produced an XML schema which supports a limited subset of Beach Monitoring data and allows data transfer from participating States to EPA. OW plans to develop full STORET XML v2.0 schema(s) by February 2005 which will build off the existing WQDE XML tags and schema from the Beaches project.
- *Future Development:* A task is currently underway to provide specifications for support software (transaction based load modules) necessary to enable STORET to fully participate in the Exchange Network. These software specifications are expected by mid 2004, and will become the foundation for software modules necessary to achieve this goal. States can begin mapping data in State systems to the STORET schema(s) in March 2005. Testing of submission/acceptance of XML schema(s) by the STORET database will take place in October through December 2005. By February 2006, OW plans to complete the implementation of XML data flows into STORET through CDX. STORET will continue to fully support and operate the existing process for moving data from remote copies of STORET to the central STORET Warehouse. STORET will also build Web Services from the STORET Warehouse to support queries of STORET data for stakeholder use.

Suggested Activities for Exchange Network Partners in FY 2005 and Beyond

- Work with EPA's Office of Water to develop the STORET XML schema in a phased, modular approach.
- If wishing to participate in STORET through CDX, adopt all applicable data standards (i.e., standardized XML tags, chemical nomenclature, taxonomic nomenclature, date formatting, latitude and longitude location and associated method standards).
- Actively participate in the various working groups which are developing these standards.
- Become familiar with the requirements of STORET with regard to the documentation of the monitoring process as well as the documentation of environmental results.
- Begin mapping State data to the STORET v2.0 schema(s) in March 2005.
- Develop applications that use STORET Web Services for stakeholder analyses.
- Begin linking station locations consistent with the National Hydrography Dataset and the Geospatial One-Stop Hydrography Standard.

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An Information Session for potential applicants has been scheduled for Monday, December 15, 2003, from 2:00 to 4:00 p.m. Eastern Standard Time. If you are interested in participating in this teleconference, please contact Rebecca Moser.

Posting of Document:

This document will be posted on the EPA's OEI web site at

<http://www.epa.gov/Networkg/guidance>